

WHAT I CLAIM IS:

13. A method for producing, in the interior space of a motor vehicle, sounds that depend upon the operation of an internal combustion engine, said method including the steps of:

5 detecting fluctuations in pressure in the fresh air stream supplied to the engine, wherein said fluctuations are caused by an intake of the cylinder or cylinders of said engine;

converting said fluctuations into signals; and

10 making said signals audible via at least one speaker disposed in said interior vehicle space.

14. An apparatus for producing, in the interior space of a motor vehicle, sounds that depend upon the operation of an internal combustion engine, said apparatus comprising:

15 a pressure sensor²⁰ for detecting fluctuations in pressure in a fresh air stream to said engine, wherein said fluctuations are caused by an intake of the cylinder or cylinders of said engine;

an amplification device^{32,33, 32,48,33} for amplifying output signals of said pressure sensor; and

20 at least one speaker³⁴ disposed in said interior vehicle space and connected to said amplification device for reproducing amplified output signals.

15. An apparatus according to claim 14, wherein said pressure sensor²⁰ is arranged in such a way that it detects fluctuations in said fresh air stream upstream of a load controlling member¹⁸ of said internal

combustion engine that is disposed in said fresh air stream.

16. An apparatus according to claim 14, wherein said pressure
²⁰ sensor is a differential pressure sensor.

17. An apparatus according to claim 14, wherein said pressure
²⁰ sensor is a pressure sensor that is sensitive for a frequency range of from
1 Hz to 10 kHz.

18. An apparatus according to claim 14, wherein said
amplification device contains a filter device³² for frequency-selective
processing of output signals of said pressure sensor²⁰.

19. An apparatus according to claim 18, wherein said filter
³² device attenuates frequencies over 300 Hz.

20. An apparatus according to claim 18, wherein said filter
³² device attenuates frequencies below 30 Hz.

21. An apparatus according to claim 14, wherein a modulation
³⁶ device is provided for altering characteristics of said amplification device.

22. An apparatus according to claim 21, wherein said
amplification device contains an active module⁴⁸, and wherein said
modulation device³⁶ contains a component³⁷ for triggering said active
⁴⁸ module.

23. An apparatus according to claim 14, wherein for a multi-
cylinder internal combustion engine, said pressure sensor²⁰ is disposed at
a location at which it detects a fresh air stream that is supplied to all
cylinders.

24. An apparatus according to claim 14, wherein said internal

combustion engine has an intake manifold that is provided with a ¹⁴ hole, ²²
wherein said pressure ²⁰ sensor is provided with an input window, ²⁴ and
wherein said pressure sensor is mounted on said intake manifold such
that said input window is adjacent to said hole of said intake manifold.